

(19)

FEDERAL REPUBLIC
OF GERMANY



GERMAN PATENT
OFFICE

(12) PUBLICATION DOCUMENT
(11) DE 37 38 120 A1

(30) Int. Cl. 4:
G07 F 17/32

(21) File Reference P 37 38 120 2
(22) Filing Date November 10, 1987
(23) Publication Date May 18, 1989

DE 37 38 120 A1

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(54) Entertainment machine with a Symbol-Game Apparatus for the Representation of Symbol Combinations

DE 37 38 120 A1

Past non-prize games are displayed using front-facing display components for an entertainment machine having prize possibilities. If a predetermined number of non-prize games is reached, and if a Symbol Combination displayed by the Symbol Game Apparatus matches a predetermined symbol combination, a prize is granted. By using the available display components the results of a number of past games should be displayed.

Using the front-facing display components of the entertainment machine, the prize result for a number N of past games should be displayed in game sequence for each prize or non-prize symbol combination. If the Symbol Combination represented by the Symbol-Game Apparatus corresponds to a predetermined symbol combination, a difference amount from the game-specific prize value of the past N games as captured in the display components will be formed into a predetermined prize value and paid out.

FEDERAL PRINTING OFFICE 03.89 908 820/400 8/50

Description

The invention refers to an entertainment machine with a Symbol Game Apparatus for the representation of Symbol Combinations in accordance with the preamble to Patent Claim 1.

An Entertainment Machine with Prize Opportunities incorporating a number of light diodes in the front face is known from the German language magazine 'Münzautomat 1979,' in the October edition on page 15. If the Symbol combination displayed by the rotating bodies, once stopped, is allocated a non-prize, and if a match exists between the first rotating body and a predetermined symbol, one additional light diode is activated. If all light diodes are activated, and if the first rotating body when stopped displays a predetermined symbol in the view window, a prize value in the form of special games will be given and the light diodes will be reactivated. The display unit comprised of light diodes provides the player with information only on the required number of non-prize games for the player to be awarded a special prize in that case.

The task of this invention is to further develop a category-enlarging entertainment machine, where the game results of prior games remain knowable.

This assignment is solved according to the invention through the specific characteristics of Patent Claim 1.

Further characteristics of the invention are contained in the sub-claims.

The entertainment machine according to the invention exhibits the advantage that a number of prior games are knowable for the player as to how many games ended with a prize or without a prize. By this display of the prior player results the player is able to develop game strategies. The availability of this game-results display provides a means to convey to the player an anticipated special cash payment amount, which will be awarded if a match exists between the predetermined symbol-combination and the symbol-combination displayed by the rotating bodies. For each non-prize game displayed in the game-results a predetermined cash prize value is immediately paid out. Because the player is aware of the anticipated special cash payment amounts, an amount of enjoyment in playing remains, even when a game ends in a non-prize. In case of a non-prize game the anticipated special cash payment amount noticeably increases for the player.

The invention is presented in the drawing in two example execution forms. The drawing shows:

Fig. 1 An entertainment machine with a display comprised of light diodes, which display the game-results of prior games,

Fig. 2 An assembly for the display of game results of prior games, as a switch-circuit block diagram,

Fig. 3 A front panel of an entertainment machine with an assembly for the display of game-results of prior games.

A coin-activated entertainment machine designated as 1 in Fig. 1 comprises a random-controlled Symbol-Game Apparatus 2 consisting of three (3) adjacently arranged disk-shaped rotating bodies 3 to 5.

Above the rotating bodies 3, 5 on the sides, multiple-place seven-segment-displays 6 and 7 are envisioned.

In the five-place seven-segment-display 7 the prize is shown in DM (Deutsche Mark), and in the 3-place seven-segment-display 6 the number of special games is displayed.

The seven-segment-displays 6 and 7 are display elements of two directional counters which are envisioned to be in a control unit 8 of the microcomputer of the entertainment machine 1. A display unit 9 is envisioned between displays 6 and 7 and the rotating bodies 3 to 5 of the Symbol Game Apparatus 2 to display the prize results from the prior N=100 games in game sequence. The display unit 9 consists of light diodes which are aligned approximately parallel to each other in a first row, 9a, and a second row, 9b. The display unit first row 9a displays all prize games in game sequence, the display unit second row 9b displays all non-prize games in game sequence. Each row encompasses 100 light diodes, of which each light diode may be activated and reactivated from a switch circuit of the control unit 8. To the left and right of the Symbol-Game Apparatus 2, prize display ladders 10, 11 are envisioned to be vertically arranged in strict monotone prize sequence, consisting of multiple prize-specific display elements.

After the rotating bodies 3 to 5 come to a stop, the prize from the prize line game is displayed in prize display ladder 10, 11, by translucently illuminating a display element corresponding to the prize value, and a corresponding light diode in the first row 9a is activated. Below the prize display ladders 10, 11, adjacent service elements 13 are

arranged equidistant horizontally across the front face 12. The transparent service elements 13 are formed as buttons to press.

The elements necessary for understanding the entertainment machine 1 with prize possibilities invention are presented in the switch-circuit block diagram in Fig. 2. The switch-circuit block diagram encompasses the Symbol-Game Apparatus 2 comprised of three rotating bodies 3 to 5, Control Unit 8, multiple-place Seven-Segment displays 6, 7, as well as the display unit 9 for prize results display. The control unit 8 which incorporates a microcomputer, consists of a random-number generator 14, an assembly to convey prize determination 15, a special game counter 16, a prize credit counter 17, a switch-circuit 18 for the light diodes, a payout controller for a payout element 20, a coin unit 21, and a game-outcome dependent prize cache 22. The rotating bodies 3 to 5 formed as discs, position trackers 23 to 25 are allocated to the Symbol-Game Apparatus 2, and are in a production relationship to assembly 26 for drive motor control of rotating bodies 3 to 5. Rest positions of the rotating bodies 3 to 5 are determined by use of the random-number generator 14. Symbols are assigned to the rest positions, which combine to determine a prize or a non-prize play. The rest positions to be taken are determined by the random-number generator 14 and are transmitted by way of the control unit 26 to the drive motors of the rotating bodies 3 to 5. Concurrently the outbound signal from the random-number generator 14 is routed to an assembly 15 for prize determination. On the basis of the Symbols assigned to the rest positions the prize is determined by reference to a win-plan in the prize-determination assembly 15 which defines the prize allocated to the no-longer-moving rotating bodies 3 to 5. Dependent on the prize value determined, a counter on prize cache 17 is incremented, and its contents displayed in the multi-place Seven-Segment-Display 6. For a special game prize value the prize determination assembly 15 increments the special game counter 16, for display by multi-place Seven-Segment-Display 7. The circuit assembly 18 is activated by the prize-determination assembly 15 to control the display unit 9 for prize and for non-prize games. The prize results from the prize line games of the preceding 100 games are registered in game sequence in a sliding register-like structure prize cache 22. The predetermined symbol combinations for the awarding of prizes for preceding game results is a

part of the prize win-plan, which is stored in a ROM of the assembly 15 for prize determination. When a match occurs between a predetermined symbol and a symbol presented by the Symbol-Game Apparatus, the prize-determination assembly 15 activates the payout control unit 19 which corresponds to prize cache 22. The payout control unit 19 activates the payout unit 20 of the coin unit 21 for the paying out of the cash prize difference value.

The prize result of the preceding 100 prize line games in game sequence are made visible to the player by the display unit 9, which is activated by the control unit 18. After the rotating bodies come to a stop the prize-determination assembly 15 routes an output signal to circuit 18, where a game result-dependent light diode is activated; in the first row for a prize game, and in the second row for a non-prize game. When a match occurs between a predetermined symbol and a symbol combination presented by the Symbol-Game Apparatus 2, the prize result lag of the difference amount displayed on display unit 9 between the game-specific cash prize value and a predetermined cash prize amount is paid out. The game-specific cash prize value is registered in prize cache 22, organized in a sliding register. During the payout process for the game-specific difference amount the display unit 9 assigned to the game will be switched from a non-prize display mode to a prize display mode 9a, by a half-illuminated prize game display 9a which will become fully illuminated.

In a further invention-relevant configuration, when a match occurs between a predetermined symbol and a symbol combination presented by the Symbol-Game Apparatus, for each of the non-prize games displayed by the display units 9 a pre-settable cash amount may be payable with coordination of the payout control unit 19 and the payout unit 20 with the individual coin-independent tubes of the coin unit 21. After a successful payout of the cash amount allocated for the non-prize, the game-specific non-prize display unit 9b is cleared, and the game-specific prize display of display unit 9a is activated.

In a further invention-relevant configuration, when a match occurs between a predetermined symbol and a symbol combination presented by the Symbol-Game Apparatus 2, for each of the lagging cash prize games N_G displayed by the display units 9 the difference amount of the game-

specific cash prize value is payable to a predetermined cash prize value. The game-specific cash prize values are to be registered in prize cache 22. In the payout control unit 19 the difference amount between the game-specific cash prize value and a predetermined prize value is determined and is paid out under the administration of the payout unit 20 from the individual coin-independent tubes of the coin unit 21. The half-illuminated prize game display 9a will become fully illuminated by the circuit assembly 18 after payment of the game-specific difference amount.

An entertainment machine 30 with prize possibilities as represented in Fig. 3 differs from that entertainment machine 1 with prize possibilities presented in Fig. 1 in the display units for representation of the prize results of prior games. A multi-place Seven-Segment-Display is used for display unit 31. In the Seven-Segment-Display 31 the number of non-prize games and/or respectively the number of prize games from the prior 100 games is displayed. Using a service element assigned to display unit 31 which is available to the user, but is not represented here, a prize amount which may be awarded is presented, which amount will be achieved if which will be awarded if a match exists between the predetermined symbol-combination and the symbol-combination displayed by the Symbol-Game Apparatus. The prize amount which may be awarded is determined by finding the difference between the game-specific cash prizes of each of the 100 prior games, compared to a predetermined maximum achievable cash prize in the prize line game. When a match occurs between a predetermined symbol combination and a symbol combination presented by the Symbol-Game Apparatus after the rotating bodies stop their motion, the prize-determination assembly 15 activates the payout control unit 19 with which the game results of the preceding 100 games are sequentially queried from the prize cache 22. The payout control unit 15 compiles a to-be-paid out difference amount between the game results and a predetermined maximum game-dependent prize amount. The coin payout occurs via coin unit 21. For this purpose the payout unit 20 is activated by the payout control unit 15. The payout unit 20 incorporates an electromagnetic placement-drive for each-coin-specific coin stacking tube of the coin unit 21. The coin-specific placement-drive is activated by the payout control unit 15 dependent of the payout amount.

In a further invention-relevant configuration, a play-repetition of the 10 immediately prior games is possible during the selection processes for the prize difference amount of the prior 100 games.

Patent Claims

1. Entertainment machine with a Symbol-Game Apparatus for the representation of symbol combinations which decide concerning a prize or non-prize, where non-prizes of preceding games are displayed on the front face of the entertainment machine using display units, and where a match occurs for a symbol combination represented in the Symbol-Game Apparatus with a predetermined symbol combination, resulting in award of a prize for preceding non-prize games, **thereby characterized**, that for each symbol combination leading to a prize or non-prize from a number N of preceding games, the prize result is presented in game sequence on the display unit (9, 31).

2. Entertainment machine according to Claim 1, with a coin unit out of which by means of a payout control unit coins may be dispensed from coin-specific coin stacking tubes, **thereby characterized** that the prize result of the preceding N-games in play sequence are registered, and that in case of a match between a predetermined symbol combination and the symbol combination displayed by the Symbol-Game Apparatus (2) a difference amount is calculated and paid out between the game-specific prize value of the preceding N-games and a predetermined prize value, and that after successful payout of the game-specific difference amount a game-specific display unit (9a) is activated to represent a prize.

3. Entertainment machine according to Claim 1 with a coin unit, out of which by means of a payout control unit coins may be dispensed from coin-specific coin stacking tubes, **thereby characterized**, that in case of a matching Symbol combination between a predetermined symbol combination and the symbol combination displayed by the Symbol-Game Apparatus (2) for each of the display units (9, 31) representing a non-prize a predetermined cash amount is to be paid out of the coin unit (21), and after successful payout of the game-specific difference amount allocated for a non-prize, a game-specific

display unit (9b) is deactivated to represent a non-prize, and a game-specific display unit (9a) is activated.

games on a predetermined cash amount per game.

4. Entertainment machine according to Claim 1 and 2, thereby characterized, that in case of a matching Symbol combination between a predetermined symbol combination and the symbol combination displayed by the Symbol-Game Apparatus (2) for the preceding N_G cash prize games displayed by the display units (9, 31) the amount of game-specific cash prize value of a predetermined cash prize value is paid out, and that the half-illuminated display unit (9a) is fully illuminated after payment of the difference prize value payment

5. Entertainment machine according to Claim 1 to 4, thereby characterized, that the display units (9,31) are mounted above the Symbol-Game Apparatus (2).

6. Entertainment machine according to Claims 1 to 5, thereby characterized, that the display units (9) are arranged approximately parallel to each other in a first row and a second row, and that the display unit first row (9a) displays all prize games in game sequence, the display unit second row (9b) displays all non-prize games in game sequence.

7. Entertainment machine according to Claim 1 to 6, thereby characterized, that each row encompasses up to 100 display units (9) comprised of light diodes.

8. Entertainment machine according to Claim 1, thereby characterized, that the display unit (31) is comprised of a Seven-Segment Display.

9. Entertainment machine according to Claim 1 and 8, thereby characterized, that the count of prize and/or non-prize games may be displayed in game sequence for the preceding N -games on the display units (31), which are comprised of multiple-place seven-segment-displays.

10. Entertainment machine according to Claim 2 and 8, thereby characterized, that when a match occurs between a predetermined symbol combination and a symbol combination presented by the Symbol-Game Apparatus, the prize sum to be paid out may be displayed on the Seven-Segment Display (31), this sum resulting from the difference amounts of the achieved game-specific cash prizes from the preceding prize

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Fig. 121:121

Number 3738120
Page 4
Reporting Date November 10, 1987
Publication Date May 13, 1989

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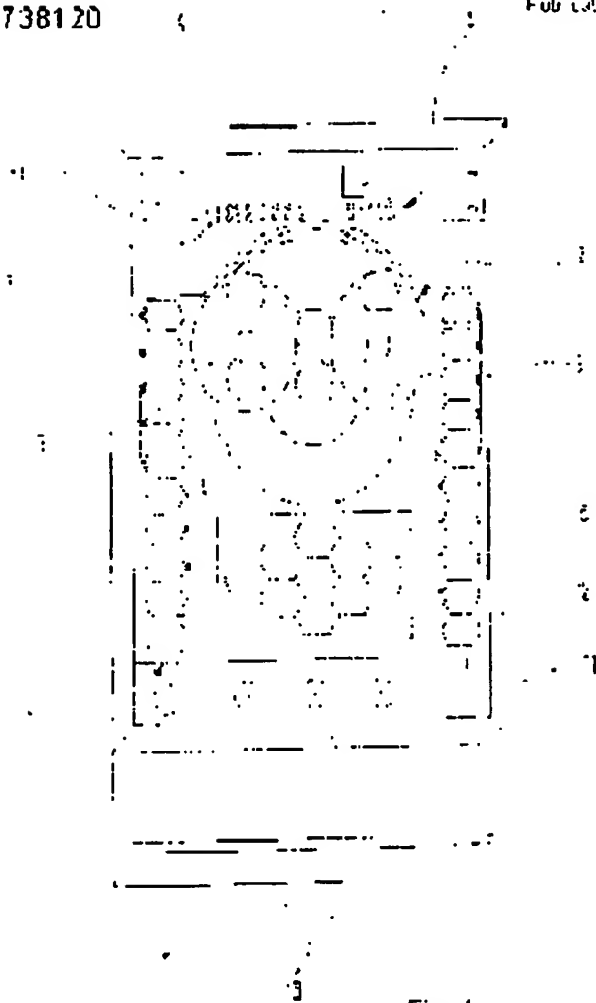


Fig. 1

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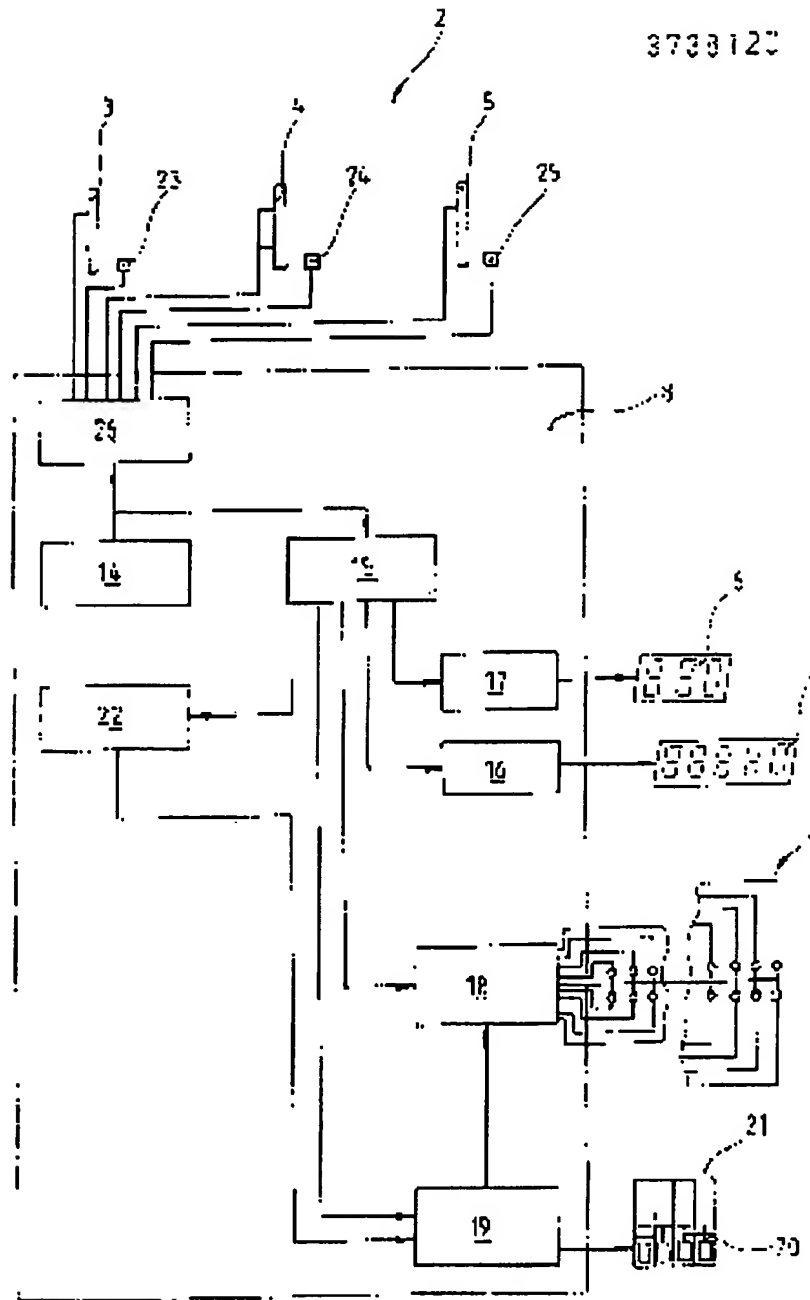


Fig 2

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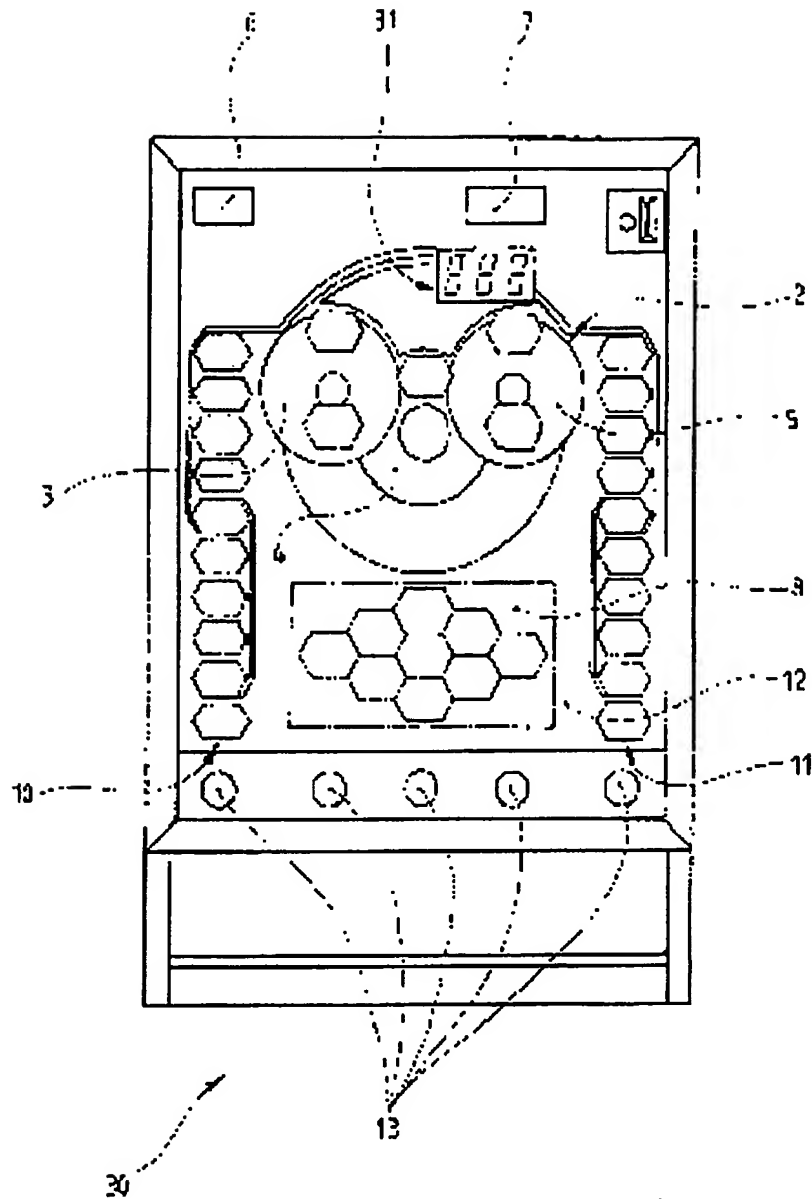


Fig. 3

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